

Initial Deliverability
Test

Form C-122-A
Revised April 20, 1955

NEW MEXICO OIL CONSERVATION COMMISSION
GAS WELL TEST DATA SHEET - - SAN JUAN BASIN

(TO BE USED FOR FRUITLAND, PICTURED CLIFFS, MESAVERDE, & ALL DAKOTA
EXCEPT BARKER DOME STORAGE AREA)

Pool So. Blanco P.C. Formation Pictured Cliffs County San Juan
Purchasing Pipeline El Paso Natural Gas Company Date Test Filed 1-14-57
Operator Western Natural Gas Company Lease Marron Well No. 4
Unit D Sec. 27 Twp. 27N Rge. 8W Pay Zone: From 2172 To 2196
Casing: OD 5 1/2" WT. 15.5 Set At 2260 Tubing: OD 1.315 WT. 1.70 T. Perf. 2153
Produced Through: Casing I Tubing _____ Gas Gravity: Measured 0.660 Estimated _____
Date of Flow Test: From 12-22-58 To 12-30-58 * Date S.I.P. Measured 10-28-58
Meter Run Size 4.026 Orifice Size 1.500 Type Chart L-10 Type Taps Flange

OBSERVED DATA

Flowing casing pressure (Dwt) 260 psig + 12 = 272 psia (a)
Flowing tubing pressure (Dwt) 262 psig + 12 = 274 psia (b)
Flowing meter pressure (Dwt) 258 psig + 12 = 270 psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken):
Normal chart reading _____ psig + 12 = _____ psia (d)
Square root chart reading (7.24)² x spring constant 5 = 262.1 psia (d)
Meter error (c) - (d) or (d) - (c) ± = 47.9 psi (e)
Friction loss, Flowing column to meter:
(b) - (c) Flow through tubing: (a) - (c) Flow through casing = 2.0 psi (f)
Seven day average static meter pressure (from meter chart):
Normal chart average reading _____ psig + 12 = _____ psia (g)
Square root chart average reading (7.25)² x sp. const. 5 = 262.8 psia (g)
Corrected seven day avge. meter press. (pf) (g) + (e) = 270.7 psia (h)
P_t = (h) + (f) = 272.7 psia (i)
Wellhead casing shut-in pressure (Dwt) 700 psig + 12 = 712 psia (j)
Wellhead tubing shut-in pressure (Dwt) 700 psig + 12 = 712 psia (k)
P_c = (j) or (k) whichever well flowed through = 712 psia (l)
Flowing Temp. (Meter Run) 61 °F + 460 = 521 °Abs (m)
P_d = 1/2 P_c = 1/2 (l) = 356 psia (n)

FLOW RATE CALCULATION

$$Q = \frac{1,049}{(\text{integrated})} \times \left(\frac{\sqrt{(c)} = 16.43}{\sqrt{(d)} = 16.19} = 1.015 \right) = 1,065 \text{ MCF/da}$$

DELIVERABILITY CALCULATION

$$D = Q \frac{1,065}{\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} = \frac{380,208}{132,579} \right]^{0.8789} \cdot 85} = 0.8961 = 954 \text{ MCF/da.}$$

SUMMARY

P_c = 712 psia
Q = 1,065 Mcf/day
P_w = 272.7 psia
P_d = 356 psia
D = 954 Mcf/day

Company Western Natural Gas
By Calvin M. Raynes
Title Petroleum Engineer
Witnessed by _____
Company _____

* This is date of completion test.
* Meter error correction factor

REMARKS OR FRICTION CALCULATIONS

GL	(1-e ^{-S})	(F _c Q) ²	(F _c Q) ² (1-e ^{-S}) R ²	P _t ² (Column i)	P _t ² + R ²	P _w
			Friction Neglected			



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